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SUPPLEMENTARY
SUMMARY OF PUBLIC COMMENTS

ON THE

SEPTEMBER 25, 1989
PROPOSED REINTERPRETATION OF
THE MINING WASTE EXCLUSION
FOR MINERAL PROCESSING WASTES

January 11, 1990

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1.0 INTRODUCTION

1.1 BACKGROUND

This document has been prepared in support of the January 1990 Bevill mineral processing final rule. The comments summarized in this document were submitted in response to a Notice of Proposed Rulemaking published on September 25, 1989. Today's rule was developed in response to a directive from a Federal Appeals Court and completes the redefinition of the scope of the Mining Waste Exclusion provided by the Bevill Amendment to the Resource Conservation and Recovery Act (RCRA), as it applies to wastes that result from mineral processing operations.

In general, three types of comments were received by the Agency. The first type of comments raise issues directly germane to the rulemaking. These comments have been fully responded to in the preamble to today's rule and are not included in this document. The second type of comments include those that provide data (e.g., description of waste management practices, waste characteristics) relevant to this rulemaking or the Report to Congress on mineral processing wastes. These data have been reviewed by EPA and have been incorporated in other background documents prepared for this rulemaking (e.g., Waste Characterization Data for Selected Mineral Processing Wastes) or will be used in the preparation of the Report to Congress, as appropriate. The third type of comments are those that raise issues not pertinent to this rulemaking; typically, these comments address items which were finalized in the September 1, 1989 NPRM. Comments in this third category are briefly summarized in this document. Because the Agency believes the issues addressed in the third category of comments are not open for discussion in conjunction with this rulemaking, responses are not provided for many of these comments. Responses are provided, however, to some of the comments in order to provide additional clarity to the regulated community.

1.2 ORGANIZATION AND APPROACH

This report presents a categorized summary of public comments on the proposed Bevill reinterpretation published September 25, 1989 and not fully responded to in the preamble to today's rule. The report is organized as described below:

THE LOW HAZARD CRITERION

Comments addressing aspects of the low hazard criterion which was finalized in the September 1, 1989 rulemaking.

THE HIGH VOLUME CRITERION

Comments addressing aspects of the high volume criterion which was finalized in the September 1, 1989 rulemaking.

MINERAL PROCESSING DEFINITION

Comments addressing aspects of the definition of mineral processing which was finalized in the September 1, 1989 rulemaking.

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RELATED RCRA ISSUES

Comments addressing other RCRA issues, including land disposal restrictions (LDRs) and the utility waste exemption

1.3 LIST OF COMMENTS RECEIVED

EPA has received and summarized the following comments on the September 25, 1989 NPRM:

Comment Number	Name of Commenter	Code for Commenter
MW2P0001	American Chrome and Chemical Inc.	(ACC)
MW2P0002	North Dakota State Dept. of Health	(NDS)
MW2P0003	Mississippi Dept. of Nat. Rscs.	(MIS)
MW2P0004	Zinc Corporation of America	(ZCA)
MW2P0005	Texas Water Commission	(TWC)
MW2P0006	Dakota Gasification Company	(DGC)
MW2P0007	American Iron and Steel Institute	(AIS)
MW2P0008	American Mining Congress	(AMC)
MW2P0009	SCM Industries	(SCM)
MW2P0010	Potomac Electric Power Company	(PEP)
MW2P0011	Florida Power and Light Company	(FPL)
MW2P0012	Occidental Chemical Corporation	(OCC)
MW2P0013	Pennwalt Corporation	(PWC)
MW2P0014	E.I. Du Pont De Nemours and Company	(DPT)
MW2P0015	Kennecott Corporation	(KEN)
MW2P0016	Environmental Defense Fund	(EDF)
MW2P0017	Florida Phosphate Council	(FPC)
MW2P0018	Shoshone-Bannock Tribes	(SBT)
MW2P0019	Baltimore City	(BAL)
MW2P0020	Allied Signal	(ASI)
MW2P0021	The Fertilizer Institute	(TFI)
MW2P0022	Idaho Mining Association	(IMA)
MW2P0023	Department of Energy	(DOE)
MW2P0024	Allied-Signal Inc.	(ALS)
MW2P0025	State of North Dakota, Office of the Governor	(SND)
MW2P0026	Copper Range Company	(CRC)
MW2P0027	Congressman B.L. Dorgan	(BLD)
MW2P0028	J.R. Simplot Company	(SIM)
MW2P0029	CF Industries Inc.	(CFI)
MW2P0030	Kemira Inc.	(KEM)
MW2P0031	ASARCO	(ASR)
MW2P0032	Eastman Kodak Co.	(EKC)
MW2PL001	Texaco	(TEX)
MW2PL002	Chemical Manufacturer's Association	(CMA)
MW2PL003	Dakota Gasification Company	(SUR)
MW2PL004	Precious Metals Producers	(PNP)

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2.0 RCRA § 8002(p) STUDY REQUIREMENTS

- Several commenters objected to EPA's proposal to remove seven wastes from the Bevill exclusion. According to the commenters, all mineral processing wastes should be excluded from regulation under Subtitle C until after a report to Congress is completed and a regulatory determination is made. (AMC 8:2) (ASR 31:11) (DPT 14:6-7)
- Two industry commenters argued that EPA has failed to satisfy the Congressional mandate to study all mineral processing wastes subject to the Bevill exclusion. (DPT 14:6-7) (ASR 31:2-4, 11)

3.0 THE LOW HAZARD CRITERION

- Two commenters expressed a general objection to the low hazard criterion. (ZCA 4:1-2) (AMC 8:2-3)
- Two industry commenters argued that the use of Method 1312 was inappropriate. (ALS 24:3) (ASR 31:8-10) One commenter objected because the use of Method 1312 was neither noticed for public comment nor promulgated in a final rule. The second commenter stated that Method 1312 is a toxicity test, not a determination of hazard and stated that toxicity should not be a limitation on the scope of special study wastes. (ASR 31:4, 8-10)
- Two commenters expressed concern that the Bevill status of waste streams relied solely on only one sample of waste from each of two currently active facilities. (ALS 24:3) (BAL 19:3)
- An industry commenter criticized the statistical methodology from EPA's hazard analysis, contending that derivation of confidence intervals based only on three data points does not represent proper application of statistics. (ASK 31:9-11)
- An industry commenter opposed the use of total chromium in the low hazard test. (KEM 30:1)

4.0 THE HIGH VOLUME CRITERION

- Two industry commenters expressed general dissatisfaction with the high volume criterion. (AMC 8:2-3) (ZCA 4:1-2)
- A commenter opposed separate liquid and solid threshold figures for the high volume cut off, arguing that the September 1 Final Rule does not account for those waste streams that may be managed either as a solid or as a liquid, specifically discussing furnace off-gas solids from elemental phosphorus production. (IMA 22:5)

EPA responds that the Bevill criteria established in the September 1, 1989 rulemaking are not open for comment in conjunction with this rulemaking. EPA notes here, however, as it has in the preamble to today's final rule, that because the waste stream is generated as a solid at the majority of facilities where it is generated, EPA's position is that the waste of interest is most appropriately considered

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a solid. In those cases where the waste is managed as a slurry, the solids entrained within, and subsequently settled from, the slurry has been used in the evaluation of this waste's compliance with the high volume and low hazard criteria.

- One commenter expressed concern over the basis for establishing the high volume thresholds, specifically disagreeing with the use of commercial facilities for comparison purposes, disaggregation of waste streams, and the separate volume criteria for liquid and solids. (ASR 31:3-6, 11)
- One commenter argued that the Bevill exclusion should be interpreted so as to apply to mineral processing wastes generated by existing pilot and other less than commercial scale processes that, if pursued, would generate high volume wastes. (TFI 21:27-28)

5.0 MINERAL PROCESSING DEFINITION

- One industry commenter opposed EPA's use of the definition of "solid waste," claiming it is too broad and was vacated in the AMC opinion. (ASR 31:4-5)
- A commenter stated that if the character of residuals is determined by the nature of the Bevill material, the residual should also be excluded. (DGC 6:7-8)
- The commenter argued that the liquid streams which result from subsequent use and reuse of "process wastewater" should be regarded simply as residuals of a Bevill-exempt waste that retain the exempt status of the parent stream. According to the commenter, the residual streams at Great Plains are not the result of "treatment" of the process wastewater as much as they are the product of further use. The commenter contended that the Bevill Amendment neither requires nor supports distinguishing between the status of the parent "process wastewater" stream and the residuals, particularly where the hazardous constituents present in the residuals are contributed solely by the exempt parent stream. Process wastewater and streams resulting from reuse of that material are process waters rather than wastes. Treating the "residual use and reuse" streams as having the same exempt status as process wastewater, the commenter argued is consistent with EPA's prior position that "it is not environmentally beneficial to create a situation in which treating a waste for recovery of useful materials is subject to Subtitle C regulations whereas disposal of the untreated wastes would be exempt from RCRA." (DGC 6:7-8)
- One commenter presented the process description of a firm, doubting it satisfied the finalized definition of mineral processing. The commenter asserted that the acid leaching or "activation" process may not qualify as a beneficiation process or an exempt mineral processing step. (MIS 3:1-3)

EPA responds that it has carefully reviewed the comment concerning the activated clay plant and concluded that the information provided indicates that the clay-activation process described qualifies as a beneficiation operation. As discussed in the preamble to the September 1

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Final Rule (54 FR 36593, 36618-36619). EPA recognizes acid washing and acid dissolution as beneficiation activities. In addition, the information provided indicates that the activation operations do not result in the destruction of the ore.

6.0 RELATED RCRA ISSUES

LAND DISPOSAL RESTRICTIONS (LDRs) ISSUES

- The commenter expressed concern that promulgating LDRs that became effective before the commenter could obtain an assessment from EPA as to the protectiveness of underground injection facilities would preclude the underground injection disposal of high volume "chloride-ilmenite" process wastes (over 1,400,000 and 600,000 annual tons at two plants) because of timing considerations and "procedural default," rather than an affirmative determination of whether the underground injection facilities are environmentally protective. (DPT 14:7)
- The commenter argued that the Agency should specifically evaluate the environmental protectiveness of the waste management facilities at each of its three plants. According to the commenter, this would delay the applicability of RCRA LDRs until EPA determines whether such wastes should be covered by RCRA Subtitle C or Subtitle D. The commenter plans to continue with its program to eliminate the use of surface impoundments, including double-lined impoundments, for the receipt of these streams and submit a "no-migration" petition for each of its affected underground injection facilities. (DPT 14:9)
- An industry commenter contended that if the EPA persists in considering the commenter's waste streams as "mineral processing" streams, the volume of these "newly identified" waste streams is so large, that EPA must evaluate the available "national capacity" to handle these streams. According to the commenter, there may be insufficient "national capacity" for these high volume wastes and a "two-year national variance" would clearly be justified. The commenter argued this variance would enable the commenter to demonstrate to EPA the environmental protectiveness of its waste management practices through the submission of "no-migration" petitions. (DPT 14:10)

The Agency has carefully reviewed the three comments. The Agency believes that these comments are not pertinent to the Bevill status of the waste streams, which is determined by the criteria established in the September 1 final rule. These comments present issues that will be addressed in a land disposal restriction treatment standards rule.

DELINEATION BETWEEN BEVILL MINERAL PROCESSING WASTES AND BEVILL UTILITY WASTES

- Two commenters argued that the rule should clarify that the withdrawal of coal gasification process wastewater from the Bevill exclusion does not apply to electric utility power plants that utilize gasification technology. (PEP 10:1) (FPL 11:1)

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Even if EPA determines that the various process water streams from coal gasification are not within the scope of the Bevill exclusion, the commenter argued that they should not be subject to regulation under Subtitle C in the near future. According to the commenter, coal gasification process wastes have been determined by EPA to be within the scope of the Bevill Amendment's exclusion for "utility wastes", and thus are released from Subtitle C regulations until after EPA has studied and issued a Report to Congress on such wastes. (DGC 6:7-8)

In response to these comments, EPA notes that it agrees with two of the commenters that this rulemaking does not apply to electric utility plants that utilize coal gasification technology. With respect to the one commercial gasification facility (DGC), EPA notes that the utility waste exemption applies to ash and not to process wastewater. As indicated in 1987¹, EPA believes that both the utility waste exemption and the Bevill waste exemption apply to ash generated by the Dakota Gasification facility. EPA plans to study this facility and the ash it generates in the Mineral Processing Waste Report to Congress and subsequently make a Regulatory Determination. Because the study requirements established for utility wastes and mineral processing wastes by RCRA Sections 8002 (n) and (p), respectively, are essentially equivalent, the Regulatory Determination will establish the permanent status of this waste with respect to both exclusions.

CONSISTENCY WITH OTHER EPA POLICIES

- The commenter argued that certain positions taken by EPA in the recent proposal may be counter-productive to the objectives of RCRA and other environmental laws and rules. One of the basic objectives of RCRA, according to the commenter, is the recovery of valuable materials from solid waste [Sec. 1003(a) (11)]. The commenter contended that this is already being accomplished with a high degree of efficiency within the phosphate fertilizer industry by recirculating process water. (CFI 29:1-2)
- The commenter argued that the second environmental objective which is satisfied by the recirculation of process water in the phosphate fertilizer industry is the minimization of ground-water resource consumption. The rules of the local water management district require the "utilization of lowest quality water available which is technically and economically feasible for the permittee's use". According to the commenter, current ground water consumption is 4 percent of what would be required if recirculation were not practiced. (CFI 29:2)
- Two commenters argued that the Dakota Gasification plant was designed to reuse process waters to the greatest extent possible. According to the commenters, if the process wastewater were disposed directly rather than reusing it for cooling, trace metals in the liquid would not be

¹Memorandum from Marcia E. Williams, Director, EPA Office of Solid Waste to Robert L. Duprey, Director, EPA Region VIII Waste Management Division, September 15, 1987, discussing the Bevill status of waste streams from coal gasification.

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concentrated and the water would pass the hazard criterion. The commenter contended that using new water for cooling rather than reusing the process water would be contrary to the Agency's objectives for recycling and reuse. (DGC 6:4-5) (SND 23:1)

- Two commenters argued that the removal of process wastewater from the Bevill exclusion, in effect, penalizes the Dakota Gasification Company for practicing "use and reuse" of the process wastewater stream. They contended this is contrary to EPA's policies of promoting recycling and waste minimization. (DOE 23:2) (DGC 6:6-8)
- Process wastewaters from coal gasification are regulated as "special wastes" under North Dakota statutory and regulatory authorities. According to the commenter these authorities provide adequate control of the management of these wastes, and argued that removal of them from Bevill would cause unnecessary regulatory complications without improved environmental quality. (NDS 2:1-2)

EPA has carefully reviewed these five comments. The Agency believes that these comments are not pertinent to the Bevill status of the waste streams, which is determined by the criteria established in the September 1 final rule.

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